

Improving Phytoplankton Monitoring Capabilities in New Hampshire

Final Report

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19 September 2013

Introduction

The New Hampshire Department of Environmental Services (NHDES) Shellfish Program recognized the importance of phytoplankton monitoring during the red tide season. Phytoplankton monitoring in New Hampshire has predominantly been executed by the Regional Quantitative Phytoplankton Monitoring Network, which is sponsored by Great Bay Community College (GBCC). The funding provided under the 2008 New Hampshire Red Tide Disaster Relief Grant provided NHDES with the means to enhance the existing phytoplankton monitoring program in New Hampshire and develop NHDES's capacity to monitor for *Pseudo-nitzschia* and other species.

Materials and Methods

In order to develop program capacity to monitor for phytoplankton, NHDES received training and purchased monitoring supplies and equipment. NHDES Shellfish Program staff received training in quantitative sampling procedures by GBCC staff in spring 2011 and by Maine Department of Marine Resources (MEDMR) staff in March 2012. NHDES purchased monitoring supplies and equipment in the summer and fall of 2012 based on recommendations from MEDMR. A list of those supplies is included in Appendix I.

Results and Conclusions

As a result of the quantitative sampling training and the purchase of monitoring supplies and equipment, the NHDES Shellfish Program has developed the capabilities for event-based phytoplankton monitoring. NHDES will continue to coordinate with GBCC staff and volunteers in order to continue to enhance the quantitative phytoplankton monitoring network in the state.

Appendix I
List of Supplies and Equipment Purchases

Company	Description	Unit	Quantity	Unit Price	Total Cost
ABRAXIS KITS	Saxitoxin PSP Shipboard ELISA Kit	1	4	\$575.00	\$2,300.00
ABRAXIS KITS	Shipboard Accessory Pack 20T	1	2	\$160.00	\$320.00
ABRAXIS KITS	Shipboard Starter Pack with Computer	1	1	\$2,600.00	\$2,600.00
ABRAXIS KITS	8 Tip Adjustable Multi-Channel Pipette	1	1	\$499.00	\$499.00
Fisher Scientific Company LLC	Rubbermaid Polyurethane Brute Buckets 10qt.	1	4	\$14.00	\$56.00
Fisher Scientific Company LLC	Fisher Brand Easy Reader Centrifuge Tubes; 50ml OD x L:28 x 115mm	500	1	\$271.15	\$271.15
Fisher Scientific Company LLC	Fisher Brand Superslip Cover slips; 50x24mm Built in Moisture Resistance	65	4	\$29.59	\$118.36
Fisher Scientific Company LLC	Fisher Brand Standard Disposable Pipettes; Graduated 7.5ml	500	2	\$45.88	\$91.76
Fisher Scientific Company LLC	Lugols Iodine Solution; 250ml 2pk	2	1	\$259.16	\$259.16
Fisher Scientific Company LLC	Fisher Brand Polypropylene Graduated Cylinder; 500ml	1	1	\$35.02	\$35.02
Fisher Scientific Company LLC	Fisher Brand Silicon Bulb-Type Safety Pipette Fillers	1	2	\$27.33	\$54.66
Fisher Scientific Company LLC	FB Borosilicate Glass Serological Pipettes; Regular Tip/ Standard Length 10ml	500	1	\$290.10	\$290.10
Fisher Scientific Company LLC	Fisher Brand Finn timer II Adjustable Volume Pipettors 20-200u	1	1	\$246.23	\$246.23
Fisher Scientific Company LLC	Fisher Brand Reditip Pipette Tips; 1-200 microliters 2 in.	5 pk	1	\$473.35	\$473.35
Fisher Scientific Company LLC	Pyrex Flask with Barrelhead Stopper; 500ml	1	2	\$54.53	\$109.06
Fisher Scientific Company LLC	Swift M10L Digital Microscope Monocular Semi-Plan - 5 megapixel	1	2	\$1,129.95	\$2,259.90
Forestry Suppliers, Inc.	YSI 30 meter with 25ft cable	1	1	\$805.00	\$805.00
Jellett Rapid Testing Ltd.	Jellett Phytoplankton Extraction Kits	1	2	\$96.00	\$192.00
Jellett Rapid Testing Ltd.	Jellett Rapid Test Phytoplankton Strips for ASP	1	125	\$27.50	\$3,437.50
Jellett Rapid Testing Ltd.	Phytoplankton Micron Filter System	1	2	\$96.00	\$192.00
Wildlife Supply Company	Nitex Bolting Cloth, 20 micron, nitex	1 yd	1	\$125.00	\$125.00
Wildlife Supply Company	Sedgewick-Rafter Counting Cells, Brass 1.0ml	1	2	\$59.95	\$119.90
Wildlife Supply Company	Palmer Counting Cells SS 0.1ml	1	2	\$79.00	\$158.00